Air Force Terminals

Air Force MILSATCOM Terminal Programs Office (MTPO)

Mission/Vision

The MILSATCOM Terminal Programs Office (MTPO) provides SATCOM terminals to combat forces of all Services. It develops, acquires and operationally deploys communication terminals synchronized to support satellite weapon system operations and provides support for 16,000 aircraft, ship, mobile and fixed site terminals.

Description

The MTPO is responsible for the acquisition of satellite communication terminals in ultra, super and extremely high frequency (UHF, SHF and EHF) and optical bands. Operating as a component of the MILSATCOM Joint Program Office (MJPO), the MTPO's terminals include airborne, ground fixed, transportable and transit case configurations and support the communications needs of the President and Secretary of Defense, the Joint Staff, Combatant Commanders and Services.

Terminals in the narrowband frequency range provide worldwide, assured, low data rate (up to 56 Kbps) satellite communication. These terminals incorporate the Joint Staff directed Demand Assigned Multiple Access (DAMA) functionality, pooling all unused resources which increases availability for users. The Air Force is currently fielding the new Airborne Integrated Terminal Group (AITG), which provides communications for combat search and rescue teams, bombers, reconnaissance, surveillance, targeting and other missions. The MTPO is also responsible for the procurement and fielding of the U.S. Special Operations Command Multi-Band, Multi-Mission Radio for Air Force users, in support of intelligence gathering, counter drug operations, reconnaissance, weather updates and other missions.

Wideband terminals provide global communications with high data rates (up to 50 Mbps). The program office is currently procuring the Ground Multi-band Terminal, a quad-band (C, X, Ku and Ka) terminal that provides the warfighter with flexible, integrated tactical communications.

The MTPO is also responsible for the installation, maintenance, upgrade and removal of the Army-developed Defense Satellite Communications System (DSCS) terminals at Air Force sites. These terminals provide worldwide, wideband SATCOM for strategic and tactical command, control, communications and intelligence users.

Protected EHF terminals provide worldwide jam-resistant, survivable communications, which ensures low probability of intercept/detection communications for National and strategic leadership. These terminals operate with a number of EHF– capable satellites, but the key satellites are the Milstar and the upcoming Advanced EHF constellations. EHF terminal programs include the current Milstar Command Post Terminal (CPT) (up to 2.4 kbps),

that supports global command and control of strategic forces, and the Family of Advanced Beyond-Line-of-Sight Terminals (FAB-T) (up to 8 Mbps). FAB–T will replace CPT and provide both strategic and tactical communications for aircraft.

The MTPO is developing terminals for both laser and wideband communications to support the new DoD Transformation Communications initiative. New Laser Communications terminals (up to 1.2 Gbps, with an objective of 10 Gbps) will be required to support Beyond Line-of-Sight (BLOS) and Line-of-Sight (LOS) communications of Intelligence, Surveillance and Reconnaissance (ISR) data. Wideband terminals (up to 274 Mbps) will be required to provide a robust, secure 2-way Ka-band satellite communications capability for both future air and ground requirements.

Providing Beyond Line-of-Sight Capability for the Global Information Grid

General Characteristics

Terminal Name	Description	Space Segment
FAB-T: Family of Advanced Beyond-Line-of-Sight Terminals	Airborne Wideband Terminal (AWT) variants add Advanced EHF Capabilities to aircraft; Command Post Terminal Replacement (CPTR) variants upgrade ground and airborne Milstar Command Post Terminals for use with AEHF satellites; will support future upgrades to support Transformational Communications Architecture requirements	AEHF, TSAT, WGS
AIT: Airborne Integrated Terminal	Aircraft terminals for UHF/VHF communications via dedicated and DAMA channels to meet JCS mandates	UFO
MBMMR: Multi-band Multi-Mission Radio	Advanced version of Spitfire incorporating Single Channel Ground and Airborne Radio System (SINCGARS) and Have Quick II interoperability	UFO
DSCS: Defense Satellite Communications System Terminals	Modernizing DSCS satellite terminals at Air Force sites	DSCS
GMT: Ground Multi-band Terminal	Tactical quad-band terminal using C-, X-, Ku- and military Ka-band satellites; replacing aging Ground Mobile Force (GMF) terminals	WGS
Laser Communications Terminal	Laser Communications Terminal to support Beyond Line-of-Sight (BLOS) and Line-of-Sight (LOS) communications for High Altitude Endurance (HAE) Intelligence, Surveillance and Reconnaissance (ISR) aircraft to meet transformational communications initiatives	TSAT

MILSATCOM

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